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EXAMINER BATISTA, MARCOS				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/578,102

**Applicant(s)**

CHOI ET AL.

**Examiner**

MARCOS BATISTA

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02/02/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4-16, 19-25, 27-36 and 38-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-16, 19-25, 27-36 and 38-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Action is in response to Applicant's amendment filed on 02/02/2009. Claims 1, 4-16, 19-25, 27-36, 38-46 are still pending in the present application. This Action is made **FINAL**.

***Response to Arguments***

2. Applicant's arguments filed on 02/02/2009 have been fully considered but they are not persuasive.

After carefully revising the office action pertinent to the present response and remarks, the following main point(s) have been identified:

1) The Applicant respectfully traverse the new obviousness rationale, at least because the cited portions of Trossen does not explicitly supply the motivation being relied on in the new rejections relying on Trossen as evidence that communication methods can be applied across multiple standards, such as IxEV-DO and IxEV-DV (refer to page 14 lines 11-17 of the Applicant's remarks);

2) The Applicant states that even assuming *arguendo* that the references were combinable as suggested in the Office Action, their combination would still lack the claimed BCMCS assignment ratio recited in independent claim 1 and similar wordings in other independent claims (refer to page 14 lines 18-21 of the Applicant's remarks);

3) The Applicants respectfully disagree with the Office's position that Hsu teaches or suggests the claimed shifting of a terminal from the specific IxEV-DO FA (channel) used for both services to another IxEV-DO FA (channel) when said terminal is receiving a IxEV-DO service that exceeds a predetermined threshold (refer to page 18 lines 6-12 of the Applicant's remarks).

Regarding point 1), In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Trossen, in analogous art, teaches a method for transmitting multicast content over a wireless channel that can be implemented in either 1xEV-DO or 1xEV-DV technology (see abstract "The present invention provides methods and apparatus for transmitting multicast data over a wireless channel", pars. 0033 lines 6-9 "In the exemplary embodiment, the targeted PER is 1% as shown in Table 1. Table 1 corresponds to cdma2000 1X-EV-DO (1.25 MHz carrier -EVolution-Data Only) systems", 0036 lines 1-6 "As can be appreciated by one skilled in the art, variations of the exemplary embodiment can support other variations of spread spectrum technology, including cdma2000 1X-EV-DV (1.25 MHz carrier -EVolution-Data and Voice) Standards and Universal Mobile Telecommunications System (UMTS) Standards"). Therefore, implementing the claimed invention using the 1xEV-DO standard would have been obvious to a person of ordinary skill in the art at the time the invention was made by combining the invention of Hsu with the teachings of Trossen.

Regarding point 2), At paragraph 53 lines 27-30, Hsu discloses using a shared channel for user data and broadcast and multicast delivery, which clearly reads on assignment ratio, since a ratio of the same channel is assigned to evdo data and broadcast multicast transmission; "And, here, the 1xEV-DV, forward-shared packet-data channel is shared by high-speed packet data

users based upon code or time multiplexing. The channel is used here also for MBS information delivery.”

Regarding point 3), a closer look to the following teachings by Hsu explains the use of another channel in order to improve capacity, and flexibility; (see paragraph 48 lines 1-10 “*In the exemplary implementation in which the CDMA 200 system provides 1xEV-DV capabilities, multicast and broadcast communication services provided pursuant to operation of the communication system utilize a forward shared packet data channel defined upon the radio link 14 together with a forward supplemental channel, also defined upon the radio link 14, by which to effectuate the communication service. That is to say, the multicast and broadcast service is effectuated, at least selectably, upon two or more transport channels*”), (see paragraph 53 lines 22-30 “*Because channels defined, selectably, upon both of the 1xEV-DV and 1xRTT physical layers are utilized to effectuate communication services, improved capacity, and flexibility, of communications are permitted. And, here, the 1xEV-DV, forward-shared packet-data channel is shared by high-speed packet data users based upon code or time multiplexing. The channel is used here also for MBS information delivery*”), and (see paragraph 81 lines 14-22 “*For instance, if there are X mobile stations in an idle state, Y mobile stations in an F-PDCH control hold mode, and Z mobile stations in an F-PDCH active mode, and if  $aX + bY + cZ$  is less than a dedicated threshold, the base station commands, through appropriate signaling protocol, the mobile stations into the BCMCS dedicated mode. The dedicated threshold is a threshold number of dedicated-mode BCMCS users, and the values of a, b and c are waiting parameters*”).

Therefore, the argued features are written such that they read upon the cited reference(s).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 4-7, 16, 19-25, 27-36, and 38-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US 20030054807 A1), hereafter “Hsu,” in view of Trossen et al. (US 20030157899 A1), hereafter “Trossen.”

Consider claim 1, Hsu discloses a communication system for appointing a frequency assignment (FA) mode and/or a broadcast/multicast service (BCMCS) assignment ratio in a 1xEV-DO (see abstract – Hsu refers to frequency assignment in the data portion of the 1xEV-DV technology) system in order to provide a BCMCS, the communication system comprising (see **figs. 10 and 11, pars. 0073 - 0077**): at least one access terminal (AT) (12) for receiving a 1xEV-DO service or the BCMCS through the 1xEV-DO system (see **fig. 1 par. 0044 lines 1-13**); a base station manager (BSM) (22) for receiving BCMCS control information containing the FA mode and transmitting a received BCMCS control information to a 1xEV-DO access network controller (ANC) (18) (see **fig. 1 pars. 0045 lines 1-13, 0053 lines 1-12 and 27-30, 0074 lines 1-4**); and an access network including a 1xEV-DO access network transceiver subsystem (ANTS) and the 1xEV-DO ANC (18) for temporarily storing the received BCMCS control information and controlling a message being transmitted to said at least one access terminal (12), according to the FA mode and/or the BCMCS assignment ratio contained in the BCMCS control information (see **fig. 1, pars. 0045 lines 1-13, 0057 lines 1-6**), wherein the 1xEV-DO ANC is configured for assigning a specific 1xEV-DO FA, from among 1xEVDO FAs available for the 1xEV-DO service, to the BCMCS according to each access network area in the 1xEV-DO system (see **par. 0048 lines 1-10**); the FA mode includes a dedicated BCMCS mode where the specific 1xEV-DO FA is allocated exclusively for the BCMCS, and a mixed BCMCS mode where the specific 1xEV-DO (see **pars. 0053 lines 27-30, 0079 lines 14-19**).

Hsu, however, does not particular refer to the method of claim 1 being implemented in a 1xEV-DO environment, but in a 1xEV-DV technology.

Trossen, in analogous art, teaches a method for transmitting multicast content over a

wireless channel that can be implemented in either 1xEV-DO or 1xEV-DV technology (see **abstract, pars. 0033 lines 6-9, 0036 lines 1-6**).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Hsu and have it implemented in the 1xEV-DO environment, as taught by Trossen. The motivation would have been in order to provide network compatibility between different technologies (see **abstract, pars. 0033 lines 6-9, 0036 lines 1-6**).

Consider claim 4, Hsu as modified by Trossen discloses claim 1 above. Hsu also discloses wherein frequency the capacity of the specific 1xEV-DO FA is allocated to the BCMCS and the 1xEV-DO service in accordance with the inputted BCMCS assignment ratio (see fig. 2, pars. 0048 lines 1-10, 0049 lines 1-9, 0053 lines 1-12 and 27-30, 0054 lines 1-6).

Consider claim 5, Hsu as modified by Trossen discloses claim 1 above. Hsu also discloses wherein the FA mode is contained in a system parameter message for the BCMCS in the 1xEV-DO system and then transmitted (see fig. 2, par. 0054 lines 1-6).

Consider claim 6, Hsu as modified by Trossen discloses claim 1 above. Hsu also discloses wherein the base station manager stores a BCMCS control program performing a function of inputting the BCMCS control information, determining whether the inputted BCMCS control information is correct information or not, inserting the BCMCS control information into the system parameter message, and transmitting the system parameter message to the access



network (see par. 0077 lines 6-11).

Consider claim 7, Hsu as modified by Trossen discloses claim 1 above. Hsu also discloses wherein the access network includes a base station controller (BSC) and a base station transceiver subsystem (BTS) (see fig. 1, par. 0045 lines 1-13).

Consider claim 16, Hsu discloses a method of appointing an FA mode in a 1xEV-DO system including at least one access terminal (AT) (12), an access network (AN) and a base station manager (BSM) (22), the access network including a (i) 1xEV-DO access network transceiver subsystem (ANTS) for transmitting packet data and various messages in order to provide a 1xEV-DO service and/or a broadcast/multicast service (BCMCS) to said at least one access terminal (12) and (ii) a 1xEV-DO access network controller (ANC) (18), the method comprising the steps of (see figs. 10 and 11, pars. 0073 - 0077): a) inputting BCMCS control information containing FA (frequency assignment) mode information and BCMCS assignment ratio information and determining whether the inputted information is valid or not (see pars. 0077 lines 6-11, 0078 lines 1-4); b) operating a timer and simultaneously transmitting the BCMCS control information to the access network (see pars. 0019 lines 11-13, 0081 lines 1-22); c) determining whether a predetermined check time is ended or not and checking whether a response signal is received from the access network or not (see pars. 0072 lines 5-8, 0077 lines 1-11, 0078 lines 1-4); and d) outputting an error message of the BCMCS control information when the response signal is not received in the predetermined check time (see pars. 0078 lines 1-4, 0082 lines 1-12, 0088 lines 1-13);

wherein the FA mode includes a dedicated BCMCS mode where a specific 1xEV-DO FA, from among- 1xEV-DO FAs available for the 1xEV-DO service, is allocated exclusively for the BCMCS, and a mixed BCMCS mode where the specific 1xEV-DO FA is allocated to both the BCMCS and the 1xEV-DO service (see **pars. 0053 lines 27-30, 0079 lines 14-19**); and the inputted BCMCS assignment ratio information indicates, in the mixed BCMCS mode, a ratio of (i) a first portion of frequency capacity of the specific 1xEV-DO FA allocated to the BCMCS to (ii) a second portion of frequency capacity of the specific 1xEV-DO FA allocated to the 1xEV-DO, wherein said ratio is used to allocate the frequency capacity of the specific 1xEV-DO FA to both the BCMCS and the 1xEV-DO service for providing both the BCMCS and the 1xEV-DO service on said specific 1xEV-DO FA (see **fig. 2, pars. 0053 lines 1-12 and 27-30, 0054 lines 1-6**).

Hsu, however, does not particular refer to the method of claim 16 being implemented in a 1xEV-DO environment, but in a 1xEV-DV technology.

Trossen, in analogous art, teaches a method for transmitting multicast content over a wireless channel that can be implemented in either 1xEV-DO or 1xEV-DV technology (see **abstract, pars. 0033 lines 6-9, 0036 lines 1-6**).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Hsu and have it implemented in the 1xEV-DO environment, as taught by Trossen. The motivation would have been in order to provide network compatibility between different technologies (see **abstract, pars. 0033 lines 6-9, 0036 lines 1-6**).

Consider claim 19, Hsu as modified by Trossen discloses claim 16 above. Hsu also discloses wherein, when the inputted BCMCS control information is not valid in step a), the base station manager outputs an error message of the BCMCS control information (see pars. 0078 lines 1-4, 0088 lines 1-13).

Consider claim 20, Hsu as modified by Trossen discloses claim 16 above. Hsu also discloses wherein, in step b), the BCMCS control information is contained in a system parameter message for the BCMCS and then transmitted (see fig. 2, par. 0054 lines 1-6).

Consider claim 21, Hsu as modified by Trossen discloses claim 16 above. Hsu also discloses wherein, in step c), the predetermined check time is a period of time from a time point at which the timer operates to a time point at which the base station manager halts an operation checking whether the response signal is received from the access network or not (see par. 0088 lines 1-13).

Consider claim 22, Hsu as modified by Trossen discloses claim 16 above. Hsu also discloses wherein the base station manager operates the timer in step b) and simultaneously starts a count, increases a number of times of the count by one time whenever the predetermined check time is ended, and resets the timer (see par. 0071 lines 8-13).

Consider claim 23, Hsu as modified by Trossen discloses claim 16 above. Hsu also discloses wherein the base station manager repeats the operation checking whether the response

signal is received from the access network or not by a predetermined number of times of a count, and outputs an error message of the BCMCS control information when the response signal is not received during a specific period of time required to reach the predetermined number of times of the count (see pars. 0078 lines 1-4, 0088 lines 1-13).

Consider claim 24, Hsu as modified by Trossen discloses claim 16 above. Hsu also discloses wherein, when the response signal is received in step d), the base station manager outputs a success message reporting successful reception of the BCMCS control information to the access network (see par. 0082 lines 10-12).

Consider claims 25 and 36, Hsu discloses a method of controlling a broadcast/multicast service (BCMCS) in a 1xEV-DO system including at least one access terminal (AT), an access network (AN) and a base station manager (BSM), the access network including (i) a 1xEV-DO access network transceiver subsystem (ANTS) for transmitting packet data and various messages in order to provide a 1xEV-DO service and/or a BCMCS to at least one access terminal and (ii) a 1xEV-DO access network controller (ANC), the method comprising the steps of (see figs. 10 and 11, pars. 0073 - 0077): a) at least one AT receives an overhead message transmitted from the access network (see par. 0020); b) at least one AT confirms a CDMA channel list contained in the overhead message, selects a frequency assignment (FA) and tunes to the selected FA (see par. 0020); c) when the BCMCS is requested, at least one AT determines whether the FA to which the access terminal is tuned is a BCMCS FA and if not, shifts to the BCMCS FA (see pars. 0051 1-14, 0053 lines 1-30); and d) at least one AT receives the BCMCS simultaneously

with the 1xEV-DO service over BCMCS FA wherein frequency capacity of the BCMCS FA is allocated to both the BCMCS and the 1xEV-DO service in accordance with a predetermined BCMCS assignment ratio (see pars. 0053 lines 1-30, 0075 lines 1-14, 0076 lines 1-11).

Hsu, however, does not particular refer to the method of claims 25 and 36 being implemented in a 1xEV-DO environment, but in a 1xEV-DV technology.

Trossen, in analogous art, teaches a method for transmitting multicast content over a wireless channel that can be implemented in either 1xEV-DO or 1xEV-DV technology (see abstract, pars. 0033 lines 6-9, 0036 lines 1-6).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Hsu and have it implemented in the 1xEV-DO environment, as taught by Trossen. The motivation would have been in order to provide network compatibility between different technologies (see abstract, pars. 0033 lines 6-9, 0036 lines 1-6).

Consider claim 27, Hsu as modified by Trossen discloses claim 25 above. Hsu also discloses wherein, in step a), the overhead message includes at least one message of a Sector-Parameter message (see par. 0083 lines 15-18).

Consider claims 28 and 38, Hsu as modified by Trossen discloses claims 27 and 36 above. Hsu also discloses wherein the Sector-Parameter message includes information on the CDMA channel list (see par. 0092 lines 1-11).

Consider claim 29, Hsu as modified by Trossen discloses claim 25 above. Hsu also

discloses wherein, in step b), the CDMA channel list includes information on two or more CDMA frequency assignments (see pars. 0018 lines 1-5, 0026 lines 1-5).

Consider claims 30 and 40, Hsu as modified by Trossen discloses claims 25 and 36 above. Hsu also discloses wherein, in step c), the access terminal generates a 1xEV-DO service request signal and transmits the 1xEV-DO service request signal to the 1xEV-DO access network transceiver subsystem and the 1xEV-DO access network controller, when the 1xEV-DO service is requested (see par. 0059).

Consider claims 31 and 39, Hsu as modified by Trossen discloses claims 25 and 36 above. Hsu also discloses wherein the 1xEV-DO access network controller receiving the 1xEV-DO service request signal determines whether the access terminal is tuned to a 1xEV-DO FA or the BCMCS FA (see par. 0019 lines 7-11).

Consider claims 32 and 41, Hsu as modified by Trossen discloses claims 25 and 36 above. Hsu also discloses wherein the 1xEV-DO access network controller generates a redirection message or a traffic channel assignment message and transmits the redirection message or the traffic channel assignment message to the access terminal, when it is determined that the access terminal is tuned to the BCMCS FA (see par. 0019 lines 1-13).

Consider claim 33, Hsu as modified by Trossen discloses claim 25 above. Hsu also discloses wherein the access terminal having received the redirection message or the traffic

channel assignment message shifts to the 1xEVDO FA contained in the redirection message or the traffic channel assignment message, and receives the 1xEV-DO service (see pars. 0019 lines 1-13, 0051 lines 1-14).

Consider claim 34, Hsu as modified by Trossen discloses claim 25 above. Hsu also discloses wherein the access terminal determines whether the access terminal is tuned to a 1xEV-DO FA or the BCMCS FA when the BCMCS is requested, and performs an operation of shifting to the BCMCS FA when the access terminal is in a state of being tuned to the 1xEV-DO FA (see pars. 0019 lines 1-13, 0051 lines 1-14).

Consider claim 35, Hsu as modified by Trossen discloses claim 25 above. Hsu also discloses wherein the access terminal stores information on the BCMCS FA and performs a shift operation to the BCMCS FA while changing a frequency for searching and confirming the stored information on the BCMCS FA (see pars. 0019 lines 1-13, 0051 lines 1-14, 0066 lines 20-24).

Consider claim 42, Hsu discloses a method of controlling a broadcast/multicast service (BCMCS) in a 1xEV-DO system including a plurality of access terminal (ATs), an access network (AN) and a base station manager (BSM), the access network including (i) a 1xEV-DO access network transceiver subsystem (ANTS) for transmitting packet data and various messages in order to simultaneously provide both a 1xEV-DO service and BCMCS to one of more of said access terminals and (ii) a 1xEV-DO access network controller (ANC), the method comprising the following steps performed by the 1xEV-DO ANC (see figs. 10 and 11, pars. 0053, 0073 -

0077): receiving mixed BCMCS mode information and BCMCS assignment ratio information from the BSM and storing the received information (see fig. 2, pars. 0048 lines 1-10, 0052 lines 27-30); based on the mixed BCMCS mode information, allocating frequency capacity of a specific 1xEV-DO FA to both the BCMCS and the 1xEV-DO service (see par. 0053 lines 27-30); controlling 1xEV-DO service of messages, which include both 1xEV-DO service and BCMCS and are communicated over the specific 1xEV-DO FA, according to 1xEV-DO message appointment ratio defined by the BCMCS assignment ratio, wherein said controlling comprises: (see fig. 2, pars. 0052 lines 27-30, 0054 lines 1-6); periodically determining whether or not the 1xEV-DO message exceeds a 1xEV-DO message appointment ratio (see par. 0081 lines 1-22); and if the 1xEV-DO service of the message communicated over the specific 1xEV-DO FA exceeds the 1xEV-DO message appointment ratio (see par. 0081 lines 1-22); selecting at least one access terminal, which receives the 1xEV-DO service when the 1xEV-DO service of the message exceeds the 1xEV-DO message appointment ratio, as a shift-targeted access terminal (see pars. 0053 lines 1-30, 0081 lines 1-22); assigning another 1xEV-DO FA to said shift-targeted access terminal (see pars. 0075 lines 1-14, 0048 lines 1-10, 0089 lines 1-15, 0090 lines 1-9); providing the 1xEV-DO service on said another 1xEV-DO FA to said at least one shift-targeted access terminal (see pars. 0089 lines 1-15, 0090 lines 1-9), thereby maintaining the 1xEV-DO service of messages communicated over said specific 1xEV-DO FA at or below the 1xEV-DO message appointment ratio (0081 lines 1-22).

Hsu, however, does not particular refer to the method of claims 25 and 36 being implemented in a 1xEV-DO environment, but in a 1xEV-DV technology.

Trossen, in analogous art, teaches a method for transmitting multicast content over a



wireless channel that can be implemented in either 1xEV-DO or 1xEV-DV technology (see abstract, pars. 0033 lines 6-9, 0036 lines 1-6).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Hsu and have it implemented in the 1xEV-DO environment, as taught by Trossen. The motivation would have been in order to provide network compatibility between different technologies (see abstract, pars. 0033 lines 6-9, 0036 lines 1-6).

Consider claim 43, Hsu as modified by Trossen discloses claim 42 above. Hsu also discloses wherein the BCMCS assignment ratio information contains ratio information for using a BCMCS FA resource, which is appointed for the BCMCS, in the BCMCS (see par. 0075 lines 1-14).

Consider claim 44, Hsu as modified by Trossen discloses claim 42 above. Hsu also discloses wherein the 1xEVDO message appointment ratio and the BCMCS assignment ratio together define from the entire BCMCS FA resource (see pars. 0053 lines 1-30, 0075 lines 1-14).

Consider claim 45, Hsu as modified by Trossen discloses claim 42 above. Hsu also discloses wherein the information on said another 1xEV-DO FA is recorded in a redirection message or a traffic channel assignment message and then transmitted to said at least one shift-targeted access terminal (see par. 0079 lines 1-19).

Consider claim 46, Hsu as modified by Trossen discloses claim 42 above. Hsu also

discloses wherein said at least one shift-targeted access terminal having received the redirection message or the traffic channel assignment message shifts to said another 1xEV-DO FA and receives the 1xEV-DO service over said another 1xEV-DO FA instead of said specific 1xEV-DO FA (see 0019 lines 1-13, 0048 lines 1-10, 0051 lines 1-14).

8. Claims 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US 20030054807 A1), hereafter “Hsu,” in view of Trossen et al. (US 20030157899 A1), hereafter “Trossen,” further in view of Chang et al. (US 20080019322 A1), hereafter “Chang.”

Consider claim 8, Hsu as modified by Trossen discloses claim 1, but does not particular refer to wherein the 1xEV-DO system further comprises a general ATM switch network (GAN), which is connected to the 1xEV-DO access network controller and performs a routing function for transmitted/received packet data regarding the 1xEV-DO service and/or the BCMCS.

Chang, in analogous art, teaches wherein the 1xEV-DO system further comprises a general ATM switch network (GAN), which is connected to the 1xEV-DO access network controller and performs a routing function for transmitted/received packet data regarding the 1xEV-DO service and/or the BCMCS (see fig. 1, par. 0021 lines 6-8 and 24-25).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Hsu and have it include wherein the 1xEV-DO system further comprises a general ATM switch network (GAN), which is connected to the 1xEV-DO access network controller and performs a routing function for transmitted/received packet data regarding the 1xEV-DO service and/or the BCMCS, as taught by Chang. The

motivation would have been in order to interconnect different elements of the network (see fig. 1, par. 0021).

Consider claim 9, Hsu as modified by Trossen discloses claim 1 above, but does not particular refer to wherein the 1xEV-DO system further comprises a packet data serving node (PDSN), which is connected to the GAN and performs a function of transmitting the packet data to said each access terminal through the GAN.

Chang, in analogous art, teaches wherein the 1xEV-DO system further comprises a packet data serving node (PDSN), which is connected to the GAN and performs a function of transmitting the packet data to said at least one access terminal through the GAN (see fig. 1, par. 0021 lines 13-15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Hsu and have it include wherein the 1xEV-DO system further comprises a packet data serving node (PDSN), which is connected to the GAN and performs a function of transmitting the packet data to said each access terminal through the GAN, as taught by Chang. The motivation would have been in order to interconnect different elements of the network (see fig. 1, par. 0021).

Consider claim 10, Hsu as modified by Trossen discloses claim 1 above, but does not particular refer to wherein the 1xEV-DO system further comprises an authorization authentication accounting (AAA), which is connected to the GAN and the packet data serving node and performs a subscriber authentication when an authenticated access terminal requests a

packet data service, encodes the packet data by means of an encoding key in order to transmit the packet data through the packet data serving node, and collects accounting data.

Chang, in analogous art, teaches wherein the 1xEV-DO system further comprises an authorization authentication accounting (AAA), which is connected to the GAN and the packet data serving node and performs a subscriber authentication when an authenticated access terminal requests a packet data service, encodes the packet data by means of an encoding key in order to transmit the packet data through the packet data serving node, and collects accounting data (see fig. 1, par. 0021 lines 9-12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Hsu and have it include wherein the 1xEV-DO system further comprises an authorization authentication accounting (AAA), which is connected to the GAN and the packet data serving node and performs a subscriber authentication when an authenticated access terminal requests a packet data service, encodes the packet data by means of an encoding key in order to transmit the packet data through the packet data serving node, and collects accounting data, as taught by Chang. The motivation would have been in order to interconnect different elements of the network (see fig. 1, par. 0021).

Consider claim 11, Hsu as modified by Trossen discloses claim 1 above, but does not particular refer to wherein the 1xEV-DO system further comprises a data location register, which is connected to the 1xEVDO access network controller through the GAN by means of a transmission control Protocol/Internet protocol (TC/PIP) and manages position information and paging zone of said at least one access terminal, supports mobility of at least one access terminal,

and controls a session.

Chang, in analogous art, teaches wherein the 1xEV-DO system further comprises a data location register, which is connected to the 1xEVDO access network controller through the GAN by means of a transmission control Protocol/Internet protocol (TC/PIP) and manages position information and paging zone of said at least one access terminal, supports mobility of at least one access terminal, and controls a session (see fig. 1, pars. 0021 lines 12-13 and 0022).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Hsu and have it include wherein the 1xEV-DO system further comprises a data location register, which is connected to the 1xEVDO access network controller through the GAN by means of a transmission control Protocol/Internet protocol (TC/PIP) and manages position information and paging zone of said at least one access terminal, supports mobility of at least one access terminal, and controls a session, as taught by Chang. The motivation would have been in order to interconnect different elements of the network (see fig. 1, par. 0021).

Consider claim 12, Hsu as modified by Trossen and Chang discloses claim 10 above. Hsu also teaches wherein the 1xEVDO system further comprises a BCMCS controller for providing and managing session information of said at least one access terminal, receiving subscriber profile information from the authorization authentication accounting, and assigning service authority to said at least one access terminal (see par. 0079 lines 6-10).

Consider claim 13, Hsu as modified by Trossen and Chang discloses claim 12 above. Hsu

also teaches wherein the 1xEVDO system further comprises a BCMCS contents server for receiving at least one BCMCS contents from at least one BCMCS contents provider, encoding the received BCMCS contents, and storing the encoded BCMCS contents (see fig. 1, par. 0046 lines 6-8).

Consider claim 14, Hsu as modified by Trossen and Chang discloses claim 13 above. Hsu also teaches wherein the BCMCS contents server converts the encoded BCMCS contents into an IP-based multicast stream and transmits the IP-based multicast stream to the packet data serving node by means of a multicast transmission technology (see pars. 0046 lines 1-8, 0057 lines 1-6).

Consider claim 15, Hsu as modified by Trossen and Chang discloses claim 13 above. Hsu also teaches wherein the 1xEVDO system further comprises at least one BCMCS contents providing server for transmitting the BCMCS contents to the BCMCS contents server by means of a bearer service (see par. 0079 lines 9-12).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Marcos Batista, whose telephone number is (571) 270-5209. The Examiner can normally be reached on Monday-Thursday from 8:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached at (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*/Marcos Batista/*

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Examiner

/Rafael Pérez-Gutiérrez/

Supervisory Patent Examiner, Art Unit 2617

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